

AMENDMENTS TO THE SPECIFICATION

In the Specification:

Please replace the paragraph beginning on page 1, line 15 as follows:

Trends toward more compact and lighter portable electronic equipment ~~has~~have resulted in a growing need to develop high performance and large capacity batteries for such portable electronic equipment. These batteries generate electric power by using materials capable of electrochemical reactions at the positive and negative electrodes of the battery. Battery performance characteristics include capacity of the battery, the cycle life, power capability, safety, and reliability. Factors that affect battery performance characteristics include electrochemical properties and thermal stability of the active materials that participate in the electrochemical reactions at the positive and negative electrodes. Therefore, research to improve the electrochemical properties and thermal stability of the active materials at the positive and negative electrodes continues.

Please replace the paragraph beginning on page 8, line 3 as follows:

Conductive polymers may be classified according to their electric state. The conductive polymers may be classified as either ~~an~~ emeraldine base polymersor a doped polymersis~~are~~. Emeraldine base polymers are electrically neutral polymers while a-doped polymersis~~are~~ typically charged. The emeraldine base polymer can be prepared by polymerizing monomers, or by dedoping a doped polymer. Dedoping can be carried out by adding a material that is capable of reacting with the doping material of the doped polymer, and then washing the product to obtain the emeraldine base polymer. The above doped polymer ~~doped~~is prepared by polymerizing monomers under a solution atmosphere diluted with doping material. In addition, an emeraldine base polymer may be formed by dedoping a doped polymer, and then

re-doping it with doping material. The polymer that is subjected to doping, dedoping, and re-doping has improved electroconductivity and solubility. The doped polymer loses electrons while bonding with a doping material, so it is charged with a positive charge ("+"), and it bonds with a doping material charged with a negative charge ("−").

Please replace the paragraph beginning on page 9, line 4 as follows:

According to one embodiment, the electron conductive polymer may include a polyaniline represented by the following formula 2 which is substituted by sulfonic acid and doped with ClO_4^- . This polymer can readily bonds with an organosulfur compound and can effectively facilitate cation transfer.

Please replace the paragraph beginning on page 9, line 11 as follows:

The size of the doping materials is not particularly limited as either bulky molecules or as ~~well as~~ small anions may be used. It is preferable to use doping materials that will expand the spacing of the electron conductive polymer such that the electron conductive polymer contacts the organosulfur compound effectively at a molecular level. Preferable large molecules include, but are not limited to, dodecyl benzene sulfonic acid, p-toluene sulfonic acid, benzene sulfonic acid, and octylbenzene sulfonic acid.

Please replace the paragraph beginning on page 13, line 11 as follows:

While the present invention pertains to a wide variety of lithium ion batteries and configurations, a prismatic lithium ion battery cell will be described. A cross-sectional view of a prismatic lithium ion battery cell according to an embodiment of the present invention is illustrated in FIG. 2. As shown in FIG. 2, the lithium ion battery 3, having a terminal 12, is fabricated by the following process. An electrode assembly 4 is prepared by winding a positive

electrode 5, a negative electrode 6 having an organosulfur containing protective layer as described above, and a separator 7 interposed between the positive electrode 5 and negative electrode 6. The electrode assembly 4 is placed into a battery case 8. An electrolyte is injected in the case 8, and the upper part 11 of the battery case 8 is sealed. It is understood that other types of batteries can be constructed using the negative electrode of the present invention. Further, it is understood that, when the electrolyte is a solid electrolyte, the separator 7 and the electrolyte need not be included separately. In certain embodiments, the positive electrode may include a positive active material such a lithium-containing metal oxide, a lithium containing calcogenide, a sulfur-based material, a conductive polymer, or other similar material. The separator interposed between the positive and negative electrodes may include, but is not limited to a polyethylene, polypropylene; or polyvinylidene fluoride monolayered separator; a polyethylene/polypropylene double layered separator; a polyethylene/polypropylene three layered separator; or a polypropylene/polyethylene/polypropylene three layered separator. The electrolyte may include, but is not limited to an organic liquid electrolyte, a solid polymer electrolyte, a gel-type polymer electrolyte, a solid inorganic electrolyte, a molten inorganic electrolyte, or other similar electrolyte.